

IN THE CLAIMS:

1 - 14 (Cancelled)

15. (Currently Amended) A continuous process for the preparation of silane of formula  $\text{SiH}_4$  by catalytic disproportionation of trichlorosilane of formula  $\text{SiHCl}_3$  to form  $\text{SiH}_4$  and silicon tetrachloride of formula  $\text{SiCl}_4$  in a reactive/distillative reaction zone comprising

- 5 (a) introducing  $\text{SiHCl}_3$  into a reactive/distillative reaction zone comprising a catalyst bed of a catalytically active solid at a pressure of 1 to 50 bar to form a lower-boiling  $\text{SiH}_4$ -containing product and a higher-boiling  $\text{SiCl}_4$ -containing bottom product; and
- (b) removing the lower-boiling  $\text{SiH}_4$ -containing product from the reactive/distillative reaction zone and condensing the  $\text{SiH}_4$ -containing product in an intermediate condensation at a temperature in the range from  ~~$-25^\circ\text{C}$~~   $-5^\circ\text{C}$  to  $50^\circ\text{C}$   $40^\circ\text{C}$ ;
- 10 (c) introducing the lower-boiling  $\text{SiH}_4$ -containing product which is not condensed in the intermediate condensation into a rectifying section and increasing the  $\text{SiH}_4$ -concentration in the  $\text{SiH}_4$ -containing product which is not condensed in the intermediate condensation;
- 15 (d) further condensing any  $\text{SiH}_4$ -containing product that is not condensed in the intermediate condensation and concentrated in the rectifying section in an overhead condenser from which the  $\text{SiH}_4$ -containing product is discharged as final product.

16. (Previously Presented) A process according to Claim 15 wherein the pressure in the

catalyst bed is from 1 to 10 bar.

17. (Cancelled)

18. (Currently Amended) A process according to Claim ~~17~~ 15 wherein the product ~~mixture obtained~~ SiH<sub>4</sub>-containing product discharged is separated in the overhead condenser ~~is separated~~ at a pressure higher than the pressure employed in the intermediate condensation.

19. (Currently Amended) A process according to Claim ~~17~~ 15 wherein all or part of the chlorosilane is returned to the reactive/distillative reaction zone.

20. (Currently Amended) An installation for the continuous preparation of silane of formula SiH<sub>4</sub> by catalytic disproportionation of trichlorosilane of formula SiHCl<sub>3</sub> to form SiH<sub>4</sub> and silicon tetrachloride of formula SiCl<sub>4</sub> in a reaction column having

- (1) a reactive/distillative reaction zone comprising a catalyst bed made of solid bodies of catalytically active solid and through which the disproportionation products and trichlorosilane can flow,
- (2) an inlet for introducing SiHCl<sub>3</sub> into the reactive zone,
- (3) an overhead condenser connected to the reaction column for condensing the SiH<sub>4</sub>-containing product that is formed and having an outlet for condensed SiH<sub>4</sub> at the overhead condenser,

(4) at least one intermediate condenser arranged between the reactive/distillative reaction zone and the overhead condenser, wherein the at least one intermediate condenser is operated at a temperature in the range from  $-25^{\circ}\text{C}$   $-5^{\circ}\text{C}$  to  $50^{\circ}\text{C}$   $40^{\circ}\text{C}$ ,

(5) a rectifying section for increasing the  $\text{SiH}_4$ -concentration in the lower-boiling  $\text{SiH}_4$ -containing product which is not condensed in the at least one intermediate condenser being arranged downstream of the at least one intermediate condenser in a direction of flow of the lower-boiling  $\text{SiH}_4$ -containing product coming from the at least one intermediate condenser, and

(6) an outflow for  $\text{SiCl}_4$  obtained as bottom product, for carrying out the process according to Claim  $\pm$  15.

21. (Cancelled)

22. (Currently Amended) An installation according to Claim 20 wherein the at least one intermediate condenser is arranged above the catalyst bed.

23. (Cancelled)

24. (Currently Amended) An installation according to Claim 20 wherein a separation column for separating  $\text{SiH}_4$ -containing product fractions from higher-boiling chlorosilane components is arranged downstream of the at least one intermediate condenser in the a direction of flow of the lower-boiling product mixture coming from the at least one intermediate

5 condenser.

25. (Previously Presented) An installation according to Claim 24 wherein the separation column is arranged downstream of the rectifying section.

26. (Currently Amended) An installation according to Claim 25 wherein ~~a~~ the overhead condenser is arranged between the rectifying section and the separation column.

27. (Currently Amended) An installation according to Claim 24 wherein the separation column is operated at a pressure higher than the pressure in the at least one intermediate condenser and the product that is conducted to the separation column is compressed.

28. (Currently Amended) An installation according to Claim 24 wherein a branch line that opens into a reactive/distillative reaction zone of the reaction column is connected to the a bottom outlet of the separation column.

29. (New) A process for producing silane, the process comprising the steps of:  
providing a reactive/distillative reaction zone including a catalyst bed of a catalytically active solid forming a lower-boiling  $\text{SiH}_4$ -containing product and a higher-boiling  $\text{SiCl}_4$ -containing bottom product;

5 introducing  $\text{SiHCl}_3$  into the reactive/distillative reaction zone at a pressure of 1 to 50

bar and forming the lower-boiling  $\text{SiH}_4$ -containing product and the higher-boiling  $\text{SiCl}_4$ -containing bottom product;

removing the lower-boiling  $\text{SiH}_4$ -containing product from the reactive/distillative reaction zone;

10       cooling the  $\text{SiH}_4$ -containing product after said removing in an intermediate condensation with temperatures in the range from  $-5^\circ\text{C}$  to  $40^\circ\text{C}$ ;

providing a rectifying section;

introducing the lower-boiling  $\text{SiH}_4$ -containing product which is not condensed during said cooling into a rectifying section to increasing a  $\text{SiH}_4$ -concentration in the  $\text{SiH}_4$ -containing  
15       product;

condensing the  $\text{SiH}_4$ -containing product from the rectifying section in an overhead condenser from which the  $\text{SiH}_4$ -containing product is discharged as final product.